NPT/CONF.2015/PC.III/WP.19

Preparatory Committee for the 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

4 April 2014

Original: English

Third session
New York, 28 April-9 May 2014

Humanitarian impact of nuclear weapons: known risks and consequences

Working paper submitted by Ireland on behalf of Brazil, Egypt, Mexico, New Zealand and South Africa as members of the New Agenda Coalition

Background

1. Today, Governments around the world are grappling with the evidence that was presented at two international conferences, one in Oslo (March 2013) and one in Nayarit, Mexico (February 2014), on the humanitarian consequences of a nuclear detonation. This evidence, taken together with the living and graphic testimony of several survivors (*hibakusha*) of the explosions at Hiroshima and Nagasaki, points up in considerable detail the catastrophic consequences for ordinary civilians that would follow a nuclear weapon explosion. Of great concern, too, for Governments and their citizens is the actual and foreseeable lack of capacity on the part of States or international organizations to cope with the aftermath of a nuclear detonation. Overriding the predictable consequences and lack of capacity, however, is the ever-present and arguably increasing risk of an accident, systems failure, human error or even a climate event affecting a nuclear weapon or a nuclear weapons facility. This inevitably leads to a pressing need for Governments to assess and measure those risks and to consider the policy implications that arise (see NPT/CONF.2015/PC.III/WP.18).

2. In 1946, within six months of the first use of nuclear weapons, when their immediate destructive effects had been witnessed but their longer-term consequences were only beginning to become clear, the General Assembly passed its first resolution, which called for the establishment of a commission to make specific proposals for "the elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction". That commission was also to make specific proposals "for control of atomic energy to the extent necessary to ensure its use only for peaceful purposes".

3. In 1961, spurred on by the nuclear tests undertaken in Algeria, the General Assembly passed a resolution on the report of the United Nations Scientific

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Committee on the Effects of Atomic Radiation,[1] in which the Assembly declared "that both concern for the future of mankind and the fundamental principles of international law impose a responsibility on all States concerning actions which might have harmful biological consequences for the existing and future generations of peoples of other States ...". Such concern spurred the creation of nuclear-weapon-free zones in several regions, starting with the Treaty of Tlatelolco (Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean), in which States of the region expressed the belief "[t]hat nuclear weapons, whose terrible effects are suffered, indiscriminately and inexorably, by military forces and civilian population alike, constitute, through the persistence of the radioactivity they release, an attack on the integrity of the human species and ultimately may even render the whole earth uninhabitable".[2] Subsequently, testing in the Pacific region and in Central Asia motivated the establishment of nuclear-weapon-free zones by the Treaty of Rarotonga (South Pacific Nuclear Free Zone Treaty); the Treaty of Bangkok (Treaty on the Southeast Asia Nuclear-Weapon-Free Zone); the Treaty of Pelindaba (African Nuclear-Weapon-Free Zone Treaty); and the Treaty on a Nuclear-Weapon-Free Zone in Central Asia. The devastating long-term consequences of nuclear testing have been coming further to the fore in recent times.

4. When the Treaty on the Non-Proliferation of Nuclear Weapons was agreed in 1968, it recorded in its first preambular paragraph that the Parties to the Treaty, "Considering the devastation that would be visited upon all mankind by a nuclear war ...", had recognized and understood "... the consequent need to make every effort to avert the danger of such a war and to take measures to safeguard the security of peoples". The provisions of the Treaty have formed the cornerstone of the nuclear disarmament and nuclear non-proliferation regime for more than four decades. The Treaty's envisaged processes of nuclear disarmament and nuclear non-proliferation, which are mutually reinforcing, flow from the central premise of the Treaty that, to achieve and maintain a world without nuclear weapons, the nuclear-weapon States legally committed themselves to pursue nuclear disarmament and the elimination of their nuclear arsenals, while at the same time the non-nuclear-weapon States legally committed themselves not to receive, manufacture or otherwise acquire nuclear weapons. All States were to pursue effective measures for the achievement of complete nuclear disarmament. At the same time, the Treaty reaffirmed the inalienable right to the peaceful uses of nuclear energy.

5. Eight years after the Treaty had entered into force, the General Assembly held its tenth special session, the first devoted to disarmament. The Assembly adopted, as a constituent element of the final document of this special session, a declaration that "[m]ankind today is confronted with an unprecedented threat of self-extinction arising from the massive and competitive accumulation of the most destructive weapons ever produced. Existing arsenals of nuclear weapons alone are more than sufficient to destroy all life on earth".[3]

6. The Treaty was concluded during the Cold War, when the dangers of nuclear war were heightened and more immediate. While some progress was made on bilateral arms reductions during the envisaged 25-year lifetime of the Treaty,

[1] Resolution 1629 (XVI).

[2] United Nations, *Treaty Series*, vol. 634, No. 9068.

[3] A/S-10/4, para. 11.

nuclear disarmament as envisaged and required by the Treaty had not been achieved by 1995, when States parties to the Treaty were required to meet to decide whether the Treaty should continue in force. Consequently, at the 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, States parties to the Treaty agreed, without a vote, that the Treaty should continue in force indefinitely. At the Conference, States parties agreed on decisions entitled Strengthening the review process for the Treaty; Principles and objectives for nuclear non-proliferation and disarmament; and Extension of the Treaty on the Non-Proliferation of Nuclear Weapons, as well as on a resolution on the Middle East.[4] The decision on principles and objectives for nuclear non-proliferation and disarmament, agreed at the 1995 Conference, included a reaffirmation of the preamble and provisions of the Treaty. It is beyond doubt, therefore, that concern about the devastation of a nuclear war, which informed the framers of the Treaty, remained as central a motivation for the nuclear disarmament and nuclear non-proliferation regime in 1995 as it had been at its entry into force a quarter of a century earlier.

7. In a July 1996 Advisory Opinion, the International Court of Justice, in deciding the basis on which it should examine the request put to it on the legality of the use or threat of use of nuclear weapons, looked at the unique characteristics of nuclear weapons, according to the material presented to it. The Court observed that the "destructive power of nuclear weapons cannot be contained in either space or time. They have the potential to destroy all civilization and the entire ecosystem of the planet ... . [I]n order correctly to apply to the present case the Charter law on the use of force and the law applicable in armed conflict, in particular humanitarian law, it is imperative for the Court to take account of the unique characteristics of nuclear weapons, and in particular their destructive capacity, their capacity to cause untold human suffering, and their ability to cause damage to generations to come."[5]

8. In 1998, when the New Agenda Coalition was launched, the foreign ministers of the Coalition were motivated by "the continuing threat to humanity represented by the perspective of the indefinite possession of nuclear weapons by the nuclear-weapon States, as well as by those three nuclear-weapons-capable States that have not acceded to the Treaty on the Non-Proliferation of Nuclear Weapons, and the attendant possibility of use or threat of use of nuclear weapons".[6] Since its foundation, the Coalition has worked relentlessly to champion nuclear disarmament and has consistently maintained that the only absolute guarantee that nuclear weapons will never be used again is their total elimination and the assurance that they will never be produced again.

9. At the 2000 Non-Proliferation Treaty Review Conference, States parties to the Treaty noted that "despite the achievements in bilateral and unilateral arms reduction, the total number of nuclear weapons deployed and in stockpile still amounts to many thousands".[7] The Conference also expressed "its deep concern at the continued risk for humanity represented by the possibility that these nuclear weapons

[4] NPT/CONF.1995/32 (Part I).

[5] A/51/218, annex; see also *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996*, p. 226.

[6] A/53/138.

[7] NPT/CONF.2000/28 (Parts I and II).

could be used".[8] To facilitate progress on nuclear disarmament, that Conference agreed on a series of practical steps for the systematic and progressive efforts to implement article VI of the Treaty (the 13 practical steps) and paragraphs 3 and 4 (c) of the 1995 Decision on "Principles and Objectives for Nuclear Non-Proliferation and Disarmament".[9] Included among those steps was an unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals, leading to nuclear disarmament to which all States parties are committed under article VI.

10. When Heads of State and Government gathered later in 2000 at the Millennium Summit, they adopted the Millennium Declaration in which they resolved "[t]o strive for the elimination of weapons of mass destruction, particularly nuclear weapons, and to keep all options open for achieving this aim, including the possibility of convening an international conference to identify ways of eliminating nuclear dangers".[10]

11. While the first decade of the millennium saw welcome progress in terms of reductions in the numbers of nuclear weapons, both in unilateral and bilateral measures, the momentum towards concrete and irreversible nuclear disarmament lost pace. The 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons noted the "reaffirmation by the nuclear-weapon States of their unequivocal undertaking to accomplish, in accordance with the principle of irreversibility, the total elimination of their nuclear arsenals leading to nuclear disarmament, to which all States parties are committed under article VI of the Treaty".[11] The Conference also expressed "its deep concern at the catastrophic humanitarian consequences of any use of nuclear weapons and reaffirms the need for all States at all times to comply with applicable international law, including international humanitarian law".[12]

Addressing the increasing risk: the 2015 Treaty review cycle

12. Since the 2010 Review Conference, awareness has been growing not just about the humanitarian consequences of a nuclear detonation but also about the increasing risks to the lives and health of citizens resulting from accidents, human error or systems failures involving nuclear weapons. Based on information acquired through Freedom of Information legislation, on data volunteered by State administrations and on cases of human or mechanical failures (when logged and reported), the international community has been presented in recent times with cogent evidence that the risks of an accident in the widest sense are ever-present, continuing, greater than previously suspected and arguably increasing. At the same time, increasing urban populations and the greater destructive power of nuclear weapons have served to amplify the potential health and environmental effects of a nuclear detonation. Governments and policymakers are now having to reconcile these facts with their duty of care towards their citizens' welfare in the light of these increasing risks. The reminders of the risks are especially worrying because of the evidence provided at

[8] Ibid.
[9] Ibid.
[10] A/RES/55/2.
[11] NPT/CONF.2010/50 (Vol. I), para. 79.
[12] Ibid., para. 80.

the Oslo and Nayarit conferences about the lack of capacity of both national and international agencies to provide any adequate emergency response in the event of a nuclear-weapon explosion. A discussion by Governments on a concerted policy response aimed at preventing any possibility of a nuclear detonation is therefore unavoidable (see NPT/CONF.2015/PC.III/WP.18).

13. The following are some recent key staging posts that have brought international deliberations to this point:

- In 2011, the Council of Delegates of the International Red Cross and Red Crescent Movement welcomed increased diplomatic efforts on nuclear disarmament, including at the 2010 Review Conference, and emphasized "the incalculable human suffering that can be expected to result from any use of nuclear weapons, the lack of any adequate humanitarian response capacity and the absolute imperative to prevent such use".[13]
- At the 2012 session of the Preparatory Committee for the 2015 Review Conference, the Chairman's summary reflects that "States parties recalled their deep concern at the catastrophic humanitarian consequences of any use of nuclear weapons. Many States parties stressed their serious concern that in such an event, these humanitarian consequences would be unavoidable and emergency relief could not be provided to affected areas. They expressed their expectation that the humanitarian consequences of any use of nuclear weapons would be addressed during the current review cycle."[14]
- On 4 January 2013, the General Assembly passed, by an overwhelming majority, a resolution on "Taking forward multilateral nuclear disarmament negotiations". In the preamble to that resolution, the Assembly expressed its deep concern "about the catastrophic humanitarian consequences of any use of nuclear weapons".[15]
- The Government of Norway hosted the Conference on the Humanitarian Impact of Nuclear Weapons, a fact-based exploration of the more immediate impact of a nuclear-weapon detonation, on 4 and 5 March 2013 in Oslo. The Chair's summary of the Conference found that it is "unlikely that any State or international body could address the immediate humanitarian emergency caused by a nuclear-weapon detonation in an adequate manner and provide sufficient assistance to those affected. Moreover, it might not be possible to establish such capacities, even if it were attempted".
- At the 2013 session of the Preparatory Committee for the 2015 Review Conference, "States parties recalled their deep concern at the catastrophic humanitarian consequences of any use of nuclear weapons. Many States parties referred to the unacceptable harm that would result from a detonation and expressed further concern about the wider and longer-term impact on socioeconomic development and their expectation that the humanitarian consequences would continue to be addressed during the current review cycle. Many States parties referred to the Conference on the Humanitarian Impact of Nuclear Weapons held in Oslo from 4 to 5 March 2013. Following from the

[13] Council of Delegates of the International Red Cross and Red Crescent Movement, Geneva, Switzerland, Resolution 1: Working towards the elimination of nuclear weapons, 26 November 2011.

[14] NPT/CONF.2015/PC.I/WP.53, para. 9.

[15] A/RES/67/56.

discussions at the Oslo Conference, those States parties stressed their serious concern that in such an event, these humanitarian consequences would be unavoidable and emergency relief could not be provided to affected areas. The same States parties looked forward to the follow-on conference to be hosted by Mexico in order to deepen understanding on this matter through a fact-based dialogue."[16]

- On 26 September 2013, the General Assembly held its first High-Level Meeting on nuclear disarmament. Secretary-General Ban Ki-moon recalled that, since its first resolution in 1946, nuclear disarmament has been one of the principal objectives of the United Nations.

- In a statement to the First Committee on 21 October 2013, which built upon similar efforts in both the General Assembly and the Non-Proliferation Treaty from 2012 onwards, coordinated by Switzerland and, later, South Africa and delivered by New Zealand on behalf of 125 States, those States recalled that "[i]t is in the interest of the very survival of humanity that nuclear weapons are never used again, under any circumstances. The catastrophic effects of a nuclear-weapon detonation, whether by accident, miscalculation or design, cannot be adequately addressed. All efforts must be exerted to eliminate the threat of these weapons of mass destruction." In the view of those States, "[t]he only way to guarantee that nuclear weapons will never be used again is through their total elimination. All States share the responsibility to prevent the use of nuclear weapons, to prevent their vertical and horizontal proliferation and to achieve nuclear disarmament, including through fulfilling the objectives of the Non-Proliferation Treaty and achieving its universality."

- In November 2013, the Council of Delegates of the International Red Cross and Red Crescent Movement reiterated "its deep concern about the catastrophic humanitarian consequences of any use of nuclear weapons, including the unspeakable human suffering that their use would cause and the threat that such weapons pose to food production, the environment and future generations".

14. Most recently, at the Second Conference on the Humanitarian Impact of Nuclear Weapons in Nayarit, Mexico, on 13 and 14 February 2014, the Chair's summary concluded that reconstruction of infrastructure and regeneration of economic activities, trade, communications, health facilities and schools would take several decades, causing profound social and political harm. That summary also concluded that radiation exposure could result in short- and long-term negative effects in every organ of the human body and would increase cancer risks and future hereditary pathologies. With a more thorough understanding of the sheer scale of impact of even a single detonation in a densely populated area and the inability of the international community to respond adequately in the short term, the consequences of a detonation are far greater than are apparent. Research carried out recently, particularly since the Oslo Conference, and presented in Nayarit, about national and international response capacity to a detonation has shown that national response capacities in the immediate and longer term would be severely overstretched and responses by international agencies in the short term would be ineffective to the point of being wholly inadequate.

[16] NPT/CONF.2015/PC.II/WP.49, para. 9.

15. Given the scale of the consequences, determining the level of risk to which humanity remains exposed requires an examination of the probability of a detonation. At the Conference in Nayarit, research was presented which indicated that the risks of a nuclear detonation are far higher than might commonly be perceived. Information publicly available has clearly illustrated that the world has come far closer to a nuclear detonation during the nuclear age (whether by accident, miscalculation or design) than was previously known or believed. Evidence presented at the Second Conference on the Humanitarian Impact of Nuclear Weapons showed that the risk of a nuclear-weapon detonation is growing globally owing to factors that include the vulnerability of nuclear command and control networks to cyber attacks and human error and potential access to nuclear weapons by non-State actors, in particular terrorist groups.

16. The Third Conference on the Humanitarian Impact of Nuclear Weapons, to be hosted by the Government of Austria before the end of 2014, represents an important opportunity for all States to continue and deepen the fact-based discourse of Oslo and Nayarit, and to begin considering the policy implications of the information provided.

Policy implications for States

17. The humanitarian consequences of a nuclear-weapon detonation, should one ever occur, will be calamitous, transboundary and long term. They will affect weapons and non-weapons States alike. With a heightened knowledge and understanding of these consequences, it is incumbent upon all States to move to pursue an effective and binding framework for the prevention of this eventuality. The only way to prevent a nuclear-weapon detonation is through the total elimination of nuclear weapons and the assurance that they will never be produced again. The Chair's summary of the Second International Conference on the Humanitarian Impact of Nuclear Weapons concluded, "the broad-based and comprehensive discussions on the humanitarian impact of nuclear weapons should lead to the commitment of States and civil society to reach new international standards and norms, through a legally binding instrument". In its working paper entitled "Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons" (NPT/CONF.2015/PC.III/WP.18), the New Agenda Coalition calls for all States immediately to begin discussions towards elaborating a binding framework. Such a framework would require clearly defined benchmarks and timelines for transparent, irreversible and verifiable nuclear disarmament for the achievement and maintenance of a world without nuclear weapons.

18. The evidence of the increasing risks and devastating consequences of a nuclear-weapon detonation, whether by accident, miscalculation or design, which has been brought into stark relief since the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, serves to underscore further the humanitarian considerations that were central to the creation of the Treaty. These considerations should now be equally central to all present and future actions aimed at securing a world free of nuclear weapons. The humanitarian imperatives that underpin nuclear disarmament and the urgency of achieving this goal should therefore be given due prominence in the decisions and follow-on actions agreed during the 2015 review cycle of the Non-Proliferation Treaty and in the outcome of the 2015 Review Conference.